

Remarks

The following remarks are responsive to the Office Action dated June 13, 2008 in the above referenced pending application. Applicant respectfully requests reconsideration in view of the foregoing remarks presented below.

Status of the Claims

Claims 1, 5, 6, 10-13, 19 and 20 are pending.

Claims 1, 5, 6, 10-13, 19 and 20 stand rejected under 35 U.S.C. §103.

Claim Rejections - 35 U.S.C. § 103(a): Claims 1,5,6,10 -13, 19 and 20

Claims 1,5,6,10-13, 19 and 20 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,876,0178 to Ko (hereinafter “Ko”). The Office Action argues that the application of Ko to the presently claimed invention is obvious, and cites the following passage in col. 2, lines 28-38 of Ko to support obviousness:

In the first embodiment, the method comprises the following steps. Firstly, a **metal reflective layer is formed** (Applicant’s emphasis) on a provided substrate. Then a transparent anode, an organic layer, a translucent electron-injecting cathode, a buffer layer and a transparent electrode are sequentially deposited on the metal reflective layer. In order to reduce the affect of the ambient-light reflection, during the designated deposition procedure, adjusting one or both of the thickness of the organic layer and the transparent anode that the reflected lights generate destructive optical interference and improve the visually perceived contrast of the emitted light.

The metal reflective layer of Ko must be deposited on the substrate to achieve destructive interference with incoming ambient light. The presently claimed subject matter does not require a metal reflective layer on the substrate to reduce or eliminate incident light. The structural limitations of the device described in Ko are distinct from the presently claimed embodiments which do not require a metal reflective layer; in addition, added cost and complexity are present in Ko’s disclosed embodiment by requiring a precise deposition of this metal reflective layer. Given the precision required to deposit layers having nanometer thicknesses, the trial and error experimentation of Ko would pose an undue burden and expense for the reasonably skilled

practitioner in this art or to that to which the disclosure most closely pertains. Hence, structural differences exist between the device of Ko and that of the presently claimed embodiments: While Ko only discloses possible variation of the organic layer and/or transparent electrode, any of at least one of the first electrode, the second electrode, the hole-transport layer, the electron-transport layer, and the organic active layer can be varied precisely in the present application.

Further, Ko does not present a precise, predictive determination of thickness values, or ranges of values, for at least one of the first electrode, the second electrode, the hole-transport layer, the electron-transport layer, and the organic active layer. Ko would require undue experimentation in the form of repetitive testing to obtain correct thickness values, and any change in materials for any of the OLED components would require another round of undue experimentation. In contrast, the present invention allows the artisan to select a value (or range of values $d_1 - d_2$) for any or all of the first electrode, second electrode, hole-transport layer, electron-transport layer and organic active layer, to avoid a trial-and-error approach to reduce or eliminate reflected ambient light. The presently claimed subject matter also allows for the use of conventional materials so that novel materials whose properties are not affected by variations of thickness need not be discovered to achieve the reductions in background radiation and improvement in contrast ratio.

Applicants respectfully submit that the differences between the claimed subject matter and Ko are well beyond mere optimization of results. As detailed above, Ko requires that a metal reflective layer be formed on the substrate, and does not teach or fairly suggest how the range in thicknesses of a single layer may be calculated to reduce the transmission of incident light in the manner achieved by Applicants.

Consequently, Ko fails to teach or suggest the subject matter of pending Claims 1, 5, 6, 10-13, 19 and 20. Thus, the rejection should be withdrawn.

Conclusion

In view of the above remarks, Applicants submit that the case is in condition for allowance. A Notice of Allowance is respectfully solicited.

Should the Examiner have questions about the contents of this paper or the status of the application, the Examiner is invited to call the undersigned at the telephone number listed below.

Application No.: 10/658,236
Docket No.: UC0013USNA

Respectfully submitted,

/JOHN H. LAMMING/

JOHN LAMMING
ATTORNEY FOR APPLICANTS
Registration No.:
Telephone: (302) 992-5877
Facsimile: (302) 892-1026

Dated: September 15, 2008